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When we meet with the Davis Agricultural Issues Center, AIC, on January 14, it will be important to have a common understanding of the information needed in order for the Bulletin 160, State Water Plan, to estimate the agricultural water supply that will be needed in 2030 to produce the food and other essential agricultural products required by the growing population. The purpose of this memo is to propose what information is needed and why.

More water has to be consumed in producing the public's need for food and other agricultural products than in meeting all other public needs. This is because of scientific requirements for plant growth which are not expected to change. A Water Plan which does not deal with this fact is, therefore, seriously inadequate no matter how meritorious the Plan is in other respects.

AB 2587 requires that Bulletin 160 propose enough water to produce an adequate domestic supply of food as defined in the statute. Premises underlying the statute include:

1) The worldwide production of food on a per capita basis is already declining per the United Nations FAO and the Worldwatch Institute.

2) There are expected to be one and one half billion more people worldwide competing for food in 2030.

3) About one sixth of the current world food supply is produced by the unsustainable overdraft of groundwater per the Worldwatch Institute.

4) To depend on a net import of food in 2030 would be a serious national security risk.

An adequate food supply must be an acceptably balanced supply. When food is scarce the public will pay whatever it takes to get food. However, ten dollars worth of pecan nuts or caviar will not substitute for ten dollars worth of potatoes, or cabbage, or milk, or beans or apples.

Any substantial increase in the State's overall water supply will take decades to plan, to authorize and build. If we are going to need more developed water in 2030, we should be planning for it now. In the current situation of plentiful food, water is being reallocated from

agricultural production to urban and environmental uses. However, if that reallocation will have to be replaced and augmented before 2030, the plan to do so should be made now.

Water that is applied for any purpose but is not consumed or irrecoverably lost is available for recovery and reuse. When water distribution systems were less efficient we applied more water to crops, but the crops did not consume more per unit of product. The excess water was either recovered and reused or lost to the ocean or a salt sink.

When we have 50% more people to feed, we will need 50% more food and must continue to have an acceptable diet. The public will pay what it takes to get it. The question then is to what extent there are predictable changes that can provide an adequate and balanced supply of food and other essential ag products with less than a 50% increase in the water that is now allocated to agriculture?